ABSTRACT

The invention provides a method of making an EUV lithography stage structure for use in a semiconductor microlithography with EUV (extreme ultraviolet) radiation, where the stage is utilized to hold and support a substrate such as a mask or wafer. The invention includes providing a Ti doped SiO_2 glass powder; providing a binder, said binder for binding the glass powder together; depositing a layer of the glass powder in a confined region to provide an underlying layer; applying the binder to one or more selected regions of the layer of glass powder to bind at least two glass particles together to form a primitive with the binder bonding the glass powder together at the one or more selected regions; depositing an above layer of the glass powder above the deposited layer; applying the binder to one or more selected regions of the above layer with the binder bonding the glass powder together at the one or more selected regions; repeating the steps of depositing an above layer and applying a binder thereto for a selected number of times to produce a selected number of successive layers with said binder bonding said successive layers together; and removing the unbonded glass powder which is not at said one or more selected regions to provide a bonded glass powder lithography stage structure which is then sintered and densified into a densified nonpowder glass lithography stage.